



Making Peanuts Work in Northern Australia

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Presentation Outline



- ◎ Overview of PCA and Australian Peanut Industry
- ◎ PCA Katherine NT Peanut Project 2002-2009
 - ◎ Diversification of Peanut Production Base
- ◎ Research and Development
 - ◎ Optimal Cropping Systems and Rotations
- ◎ Summary



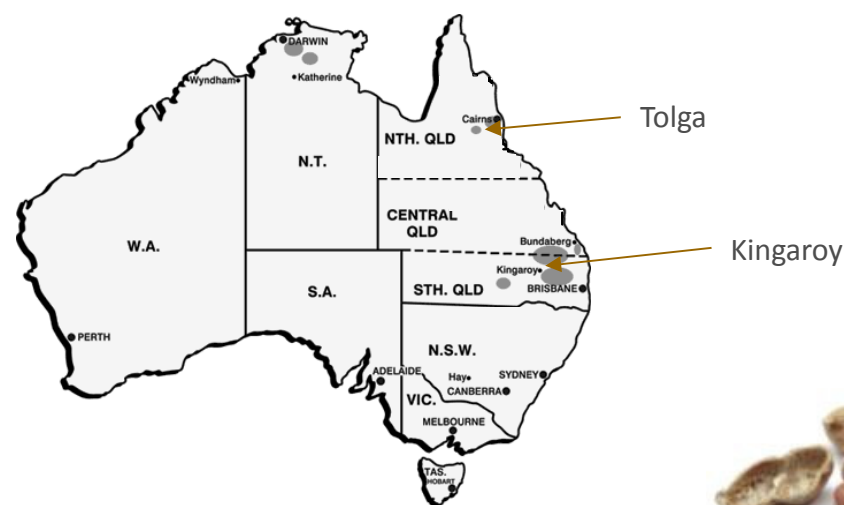
Overview



- Established in 1924, PCA is Australia's leading processor and supplier of Hi Oleic peanuts
- Located in key Australian peanut growing regions with operating facilities at Kingaroy and Tolga in Queensland
- PCA's assets include a valuable gene pool and cultivar breeding program, and water licences in the Bundaberg region
- Focused strategy on value adding peanut products and marketing into high value niche markets

Snapshot of PCA

Primary services	Growing services, peanut drying, shelling, blanching, roasting, and peanut marketing
Average peanut tonnages	Approximately 25,000 tonnes intake
Facilities	Kingaroy, Tolga, Gayndah
Number of FTE & casuals	Up to 250
Corporate structure	Public unlisted company, 877 shareholders



Leading Australian supplier and processor of Hi Oleic peanuts.....



- Hi Oleic peanuts have an oleic acid ratio that more closely resembles that of olive oil. This naturally bred characteristic makes Hi Oleic peanuts a healthier option, increases shelf life and commands a premium to mid-oleic varieties of peanuts
- PCA's processing throughput averages 25,000 tonnes of peanuts per annum, or approximately 60% - 70% of average Australian peanut production (dependant on dryland production)

PCA supplies the following peanut products:

- Peanuts in-shell
- Peanut kernels (raw, blanched, splits, gourmet)
- Granulated
- Peanut paste
- Roast peanut fines
- Peanut oil



Operating in key areas of the value chain



D i r e c t i o n o f v a l u e c h a i n

SEED	GROWING	INTAKE	PROCESSING	SELLING
Selecting Characteristics	Preparing Soil	Weighing	Blanching	Flavouring
Cross Breeding	Planting of Seed	Drying	Roasting	Packaging
Testing - Glass house	Fertilizing	Sample Grading	Separation of Splits	Marketing
Field Testing	Spraying for weeds	Aflatoxin Testing	Xray Sorting	Warehousing
Propagation of Seed	Spraying for insects	Cleaning	Colour Sorting	Distribution
Release of Commercial Qty	Spraying for diseases	Foreign Material removal	Salting	
	Turning the bushes	Storing	Flavouring	
	Threshing the peanuts	Shelling	Packaging	
	Cleaning	Grading by size	Transporation	
	Drying			

	PCA
	Farmer





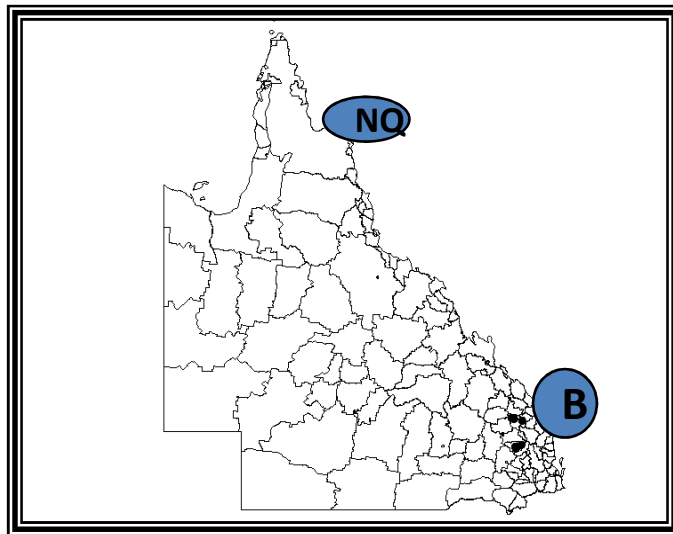
PCA Katherine NT Peanut Project 2002-2009



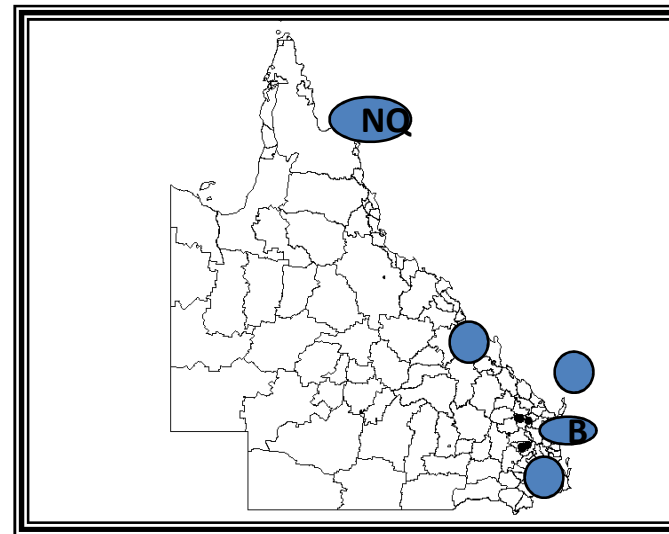
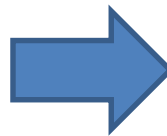
Regional Change in Peanut Production



- Peanut farming commenced in Burnett and N. Qld in early 1900's
- Mainly based on rainfed production, with large variability in production
- This created significant difficulties with marketing product domestically and overseas



Pre-1980's

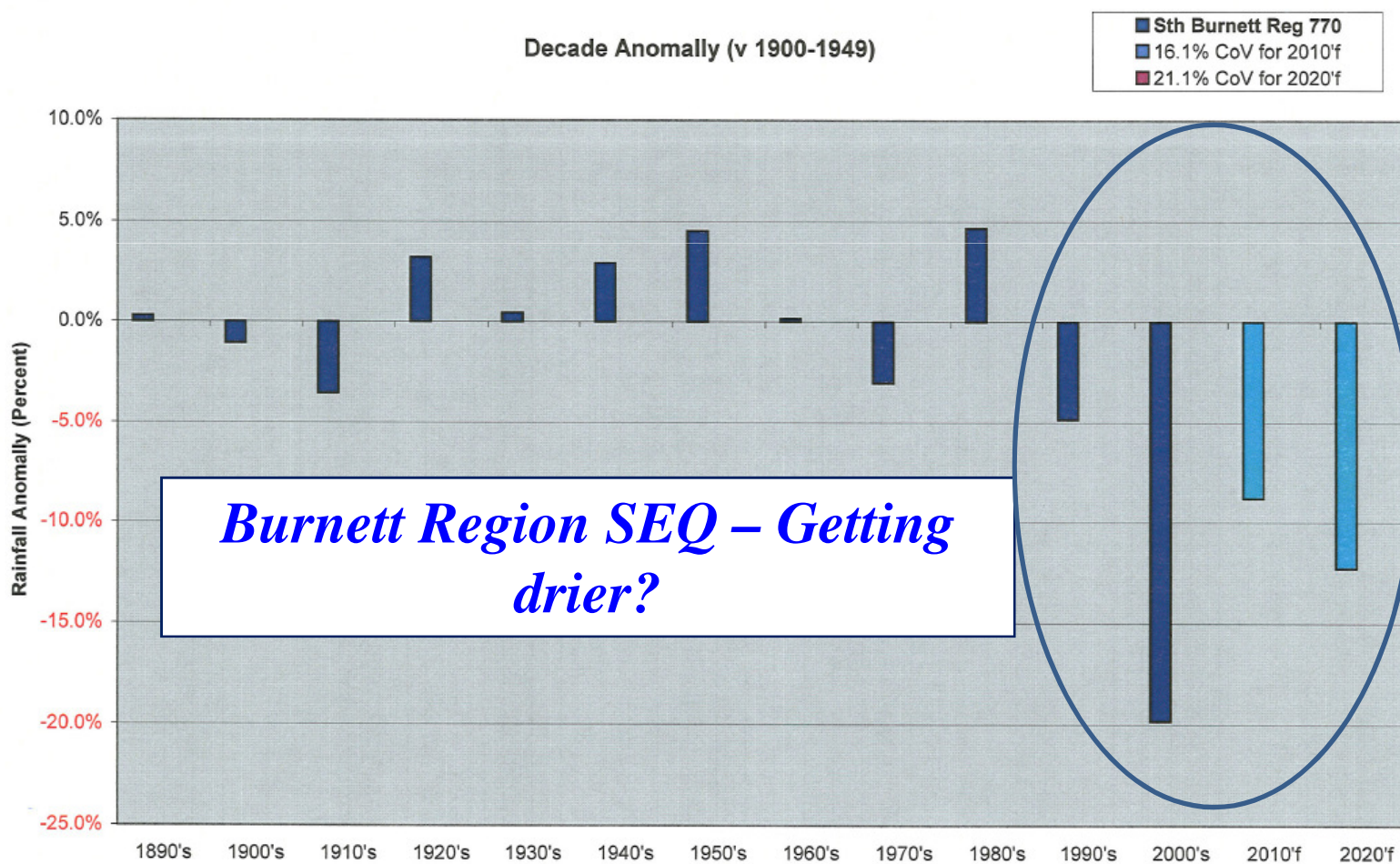


Late 1980's - 2005



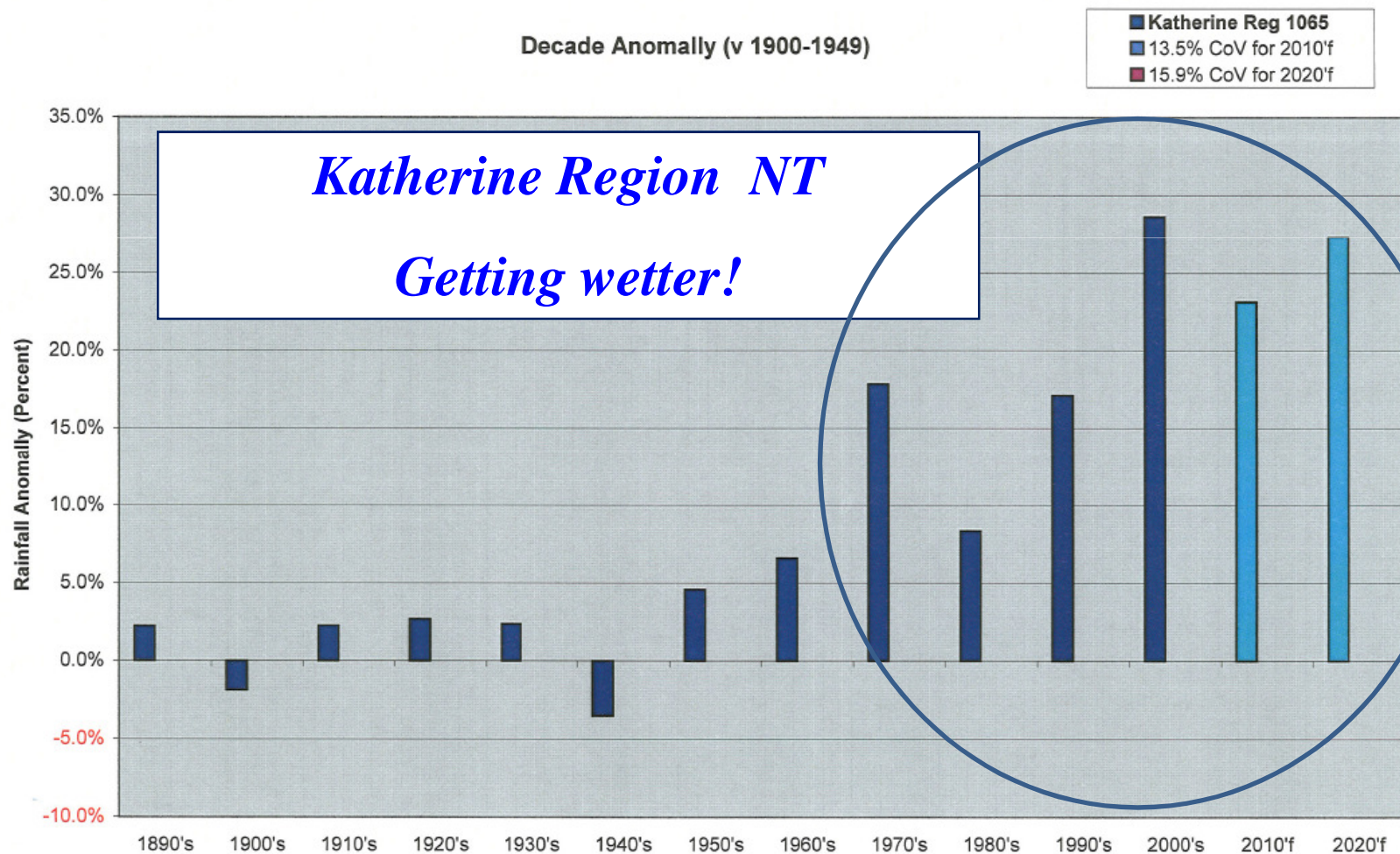
Reasons for Change in Production Base?

Climate Variability/Change



Reasons for Change in Production Base?

Climate Variability/Change



NT Development



Florina Road – 500ha Pilot Farm (Purchased 2002)



NT Development



Taylors Park - 12,000ha Farm (Purchased 2007)



Produced (in a year) up to:	4,000mt	Peanuts
	2,500mt	Corn
	12,000mt	Fodder



NT Peanut Farming System R&D



NT Govt, Qld DAFF and PCA have successfully conducted a number of peanut and maize variety trials over period 2000 - 2014 , identifying adapted varieties for NT conditions



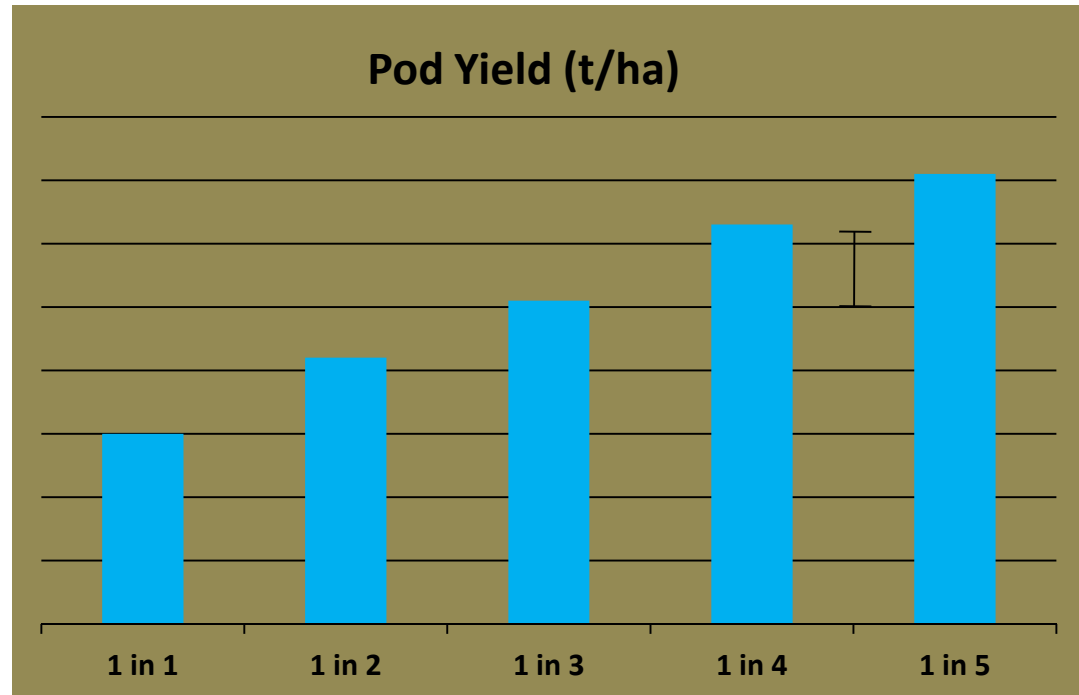
Sustainable Peanut rotations have been demonstrated in the NT

- A 1: 3 rotation with 2 grass crops (maize – forage-wheat - rice) is required for the sustainable production of peanuts.
- High value cereal options possible (waxy / gritting maize).
- Works very well with sugar cane.



Sustainable Rotations

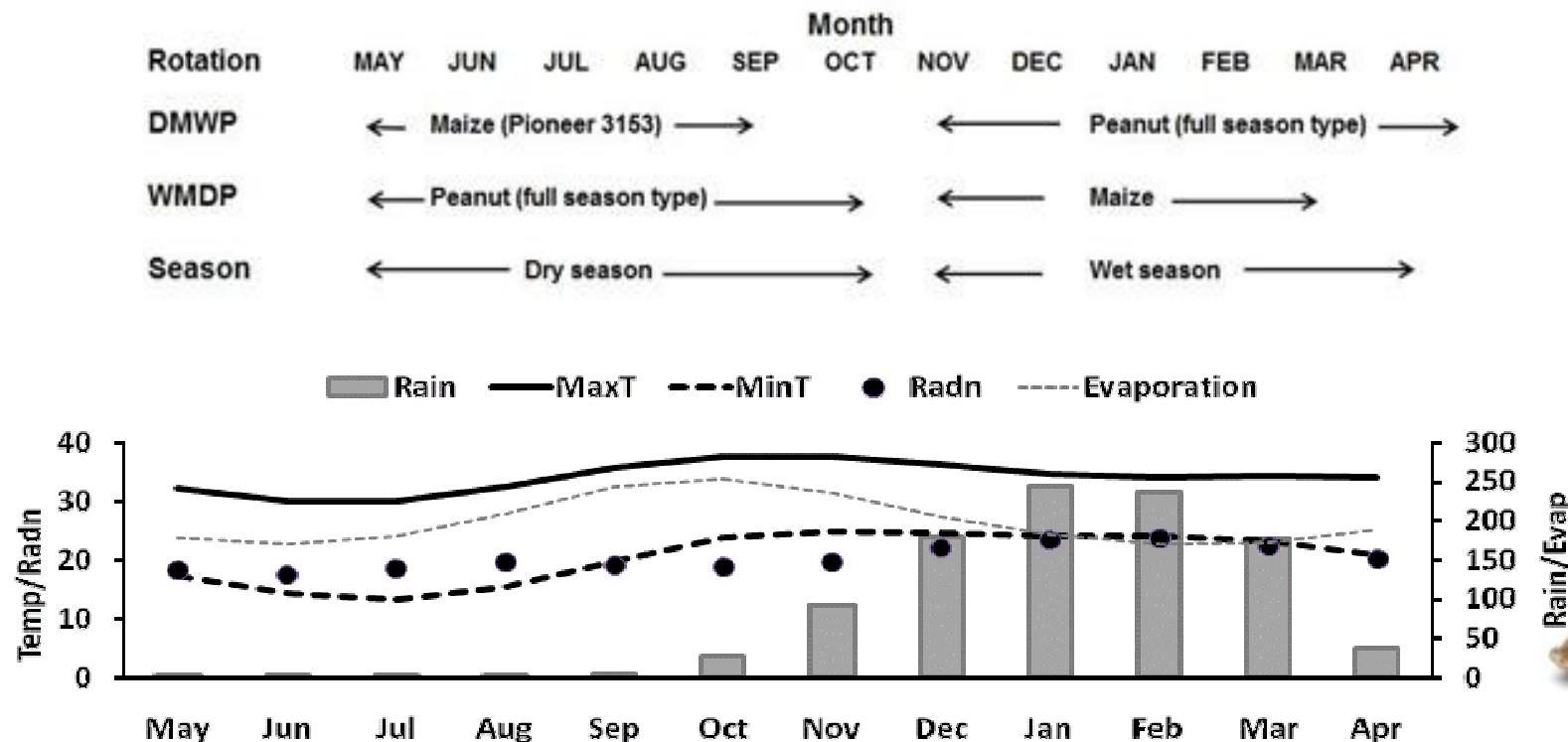
Maximum peanut yields are achieved under well rotated land (min 1 peanut : 3 crops)



Peanut Crop Simulation Models

DAFFQ/PCA have developed models to test various cropping system scenarios for Northern Australian conditions

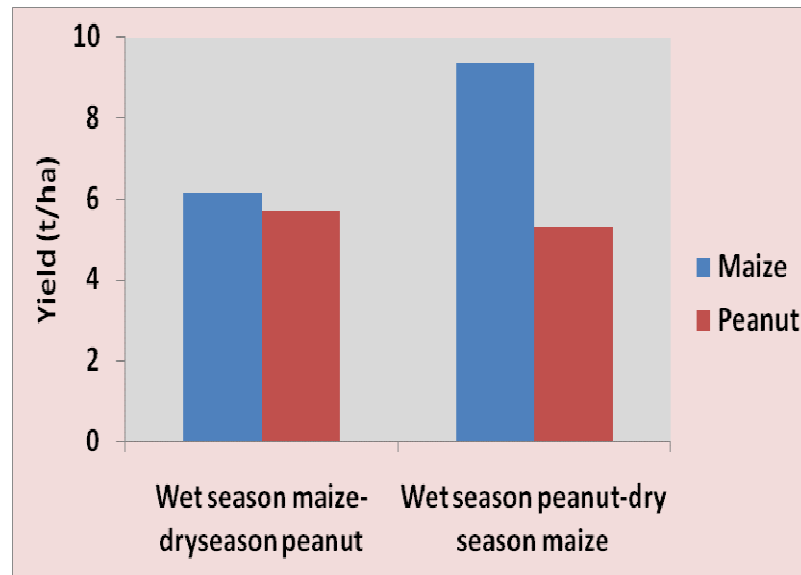
Example: Peanut-maize production simulations for Katherine (14.8°S, 132.3°E): Water optimization in peanut - maize rotations



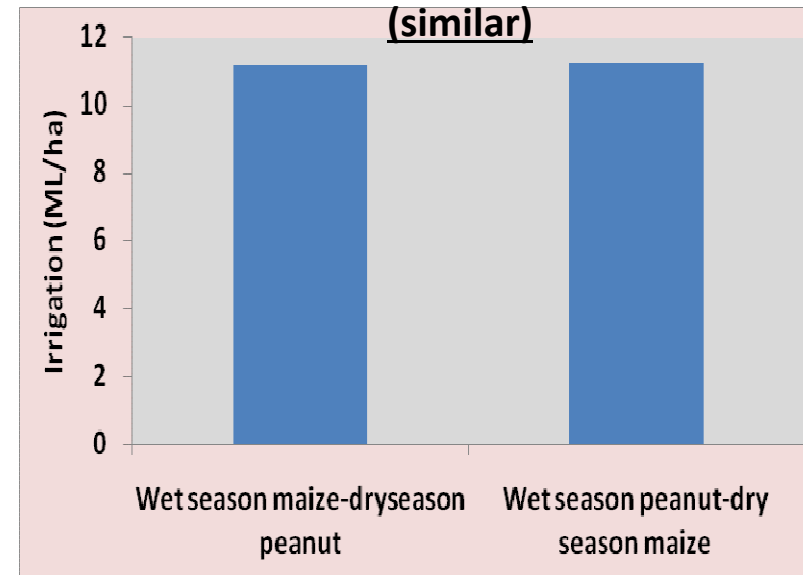
Simulated peanut and maize yield and irrigation requirements on a Tippera soil in Katherine

- Simulations suggest corn grain yield potential may be significantly higher in dry v's wet season.
- Crop model simulations allow the testing of optimum agronomic combinations for peanut production + nutrient and irrigation implications in N. Aust.

Grain yield of peanut and maize



Irrigation requirements



Optimum for Peanuts



- Dry season preferable.
- Plant late March but spread out to allow broader harvest window.
- Planting into a mulch crop works well.
- Monitor crop water use carefully to optimise irrigation.
- Close monitoring of insects and leaf disease important.
- Experienced operators preferred at digging & harvesting.



Summary



- Peanuts have been shown to grow well in NT/N Aust, and are an effective legume in rotation with a range of cereal / fodder / cane crops.
- Peanuts grown under centre pivot irrigation during winter can produce sustainable pod yields of > 4.5t/ha.
- Growing peanuts is not the stand alone operation, it needs to be a part of a broader cropping system.
- Peanut provides a cash crop + quality peanut hay.
- High value cereal (e.g. waxy/gritting corns, rice) options assist cereal rotation profitability.
- Fodder crops (sorghum/millet) provide long rotational benefits for peanuts and have ready markets into the cattle industry.

